



**LEEDS & NORTHRUP COMPANY**  
North Wales, Pennsylvania

**Engineer's & Owner's  
Certification of Closure  
for the  
Sludge Dewatering Beds**

September 1985



Engineers, Planners and Scientists



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES

Bethlehem District Office  
Bureau of Solid Waste Mgmt.  
520 East Broad Street  
Bethlehem, PA 18018  
861-2070

September 27, 1985

RE: Closure Certification for  
Leeds & Northrup  
PAD 002277952

Ms. Mary M. King  
BCM Eastern Inc.  
One Plymouth Meeting  
Plymouth Meeting, Pennsylvania 19462

Dear Mary:

This is to acknowledge receipt of your correspondence dated September 6, 1984, containing the referenced certifications and closure documentation. It has been reviewed by our technical staff and found to be acceptable.

In addition, an inspection on August 29, 1985, by our field representative confirmed that closure of that facility was completed according to the approved closure plan. This concludes the Department's requirements for closure of the facility.

If you have any questions or if I can be of further service, please do not hesitate to call.

Very truly yours,

  
JAMES A. DOLAN  
Solid Waste Specialist

JAD:mln

cc: L. Lunsch  
: G. Danyliw  
: Div. of Hazardous Waste Mgmt.  
: U. S. EPA Code 3HW33

ENGINEER'S AND OWNER'S CERTIFICATION OF CLOSURE

FOR THE

SLUDGE DEWATERING BEDS

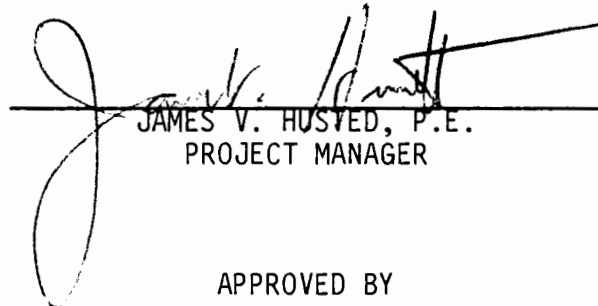
LEEDS & NORTHRUP COMPANY  
NORTH WALES, PENNSYLVANIA

EPA IDENTIFICATION NO. PAD 002277952

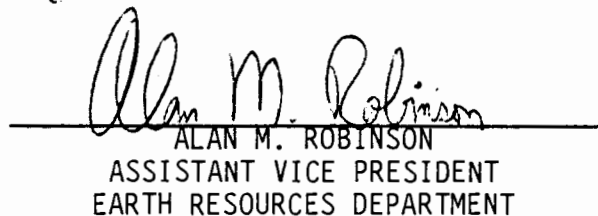
SEPTEMBER 6, 1985

BCM PROJECT NO. 00-5293-05

PREPARED BY

  
JAMES V. HUSVED, P.E.  
PROJECT MANAGER

APPROVED BY

  
ALAN M. ROBINSON  
ASSISTANT VICE PRESIDENT  
EARTH RESOURCES DEPARTMENT



Engineers, Planners and Scientists  
One Plymouth Meeting • Plymouth Meeting, PA 19462 • Phone: (215) 825-3800

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## 1.0 INTRODUCTION

Leeds & Northrup Company (Leeds & Northrup) owns and operates the Leeds & Northrup Instruments facility on Sumneytown Pike in North Wales, Montgomery County, Pennsylvania. Energy and process control instrumentation and digital computer control systems are produced at the facility.

As part of the manufacturing processes, Leeds & Northrup utilizes various metal finishing operations. Wastewater from the metal finishing processes is treated at an onsite wastewater treatment operation, and the sludge generated is classified as a hazardous waste. Until August 1984, the settled solids were piped to three sludge dewatering beds (EPA Identification No. PAD 002277952) for final dewatering. The settled solids or sludge obtained were subsequently transported offsite for disposal.

The sludge wastes dewatered in the sludge beds/vacuum filter press have been designated as F006 (wastewater treatment sludges from electroplating operations), F007 (spent plating bath solutions from electroplating operations), and F008 (plating bath sludges from the bottom of plating baths from electroplating operations). Wastewater (filtrate) from the dewatering process is discharged into Dadsworth Run, a tributary stream of the Wissahickon Creek. The discharge complies with permit approval from the National Pollutant Discharge Elimination System (Permit No. PA 0011339).

On August 31, 1984, the Pennsylvania Department of Environmental Resources (PADER) granted Leeds & Northrup authorization, under the same hazardous waste facilities permit, to implement operation of a vacuum filter system (see Appendix 1). This system replaced the three sludge dewatering beds. Under the new system, the filtered sludge is transferred to 55-gallon drums and ultimately manifested and transported offsite for final disposal. Because onsite storage of the filtered sludge does not exceed 90 days, it is not necessary, under current federal and state hazardous waste regulations, for Leeds & Northrup to obtain a Part B permit for the drum storage area. On January 29, 1985, the PADER notified Leeds & Northrup that its facility satisfied all the conditions that are deemed necessary for a hazardous waste treatment facility to have permit by rule status (see Appendix 2).

Leeds & Northrup retained BCM Eastern Inc. (BCM) to prepare a Closure Plan and to coordinate the closure of the dewatering beds. A Closure Plan for the sludge dewatering beds was submitted to the PADER on March 20, 1984. The PADER reviewed the Plan and found it to be

BCM

satisfactory with certain provisions outlined in letter dated January 3, 1985 (see Appendix 3). At the request of Leeds and Northrup, BCM responded to these provisions in a letter dated April 24, 1985 (see Appendix 4). On May 15, 1985, BCM sent additional information in response to the PADER's original January 3, 1985, request (see Appendix 5). Verbal approval of BCM's response to the provisions was received from Mr. James Dolan (PADER) on May 20, 1985.

Resolution of the groundwater monitoring issue raised by PADER (see Item 1 of Appendix 3) is addressed by copies of correspondence between BCM and PADER presented in Appendices 4, 5, and 6. Subsequent retraction of the groundwater requirement by PADER (see Appendix 6) was based upon the determination that no evidence of contamination was found in samples of soil collected from beneath the former dewatering beds, as detailed in Section 2.0.

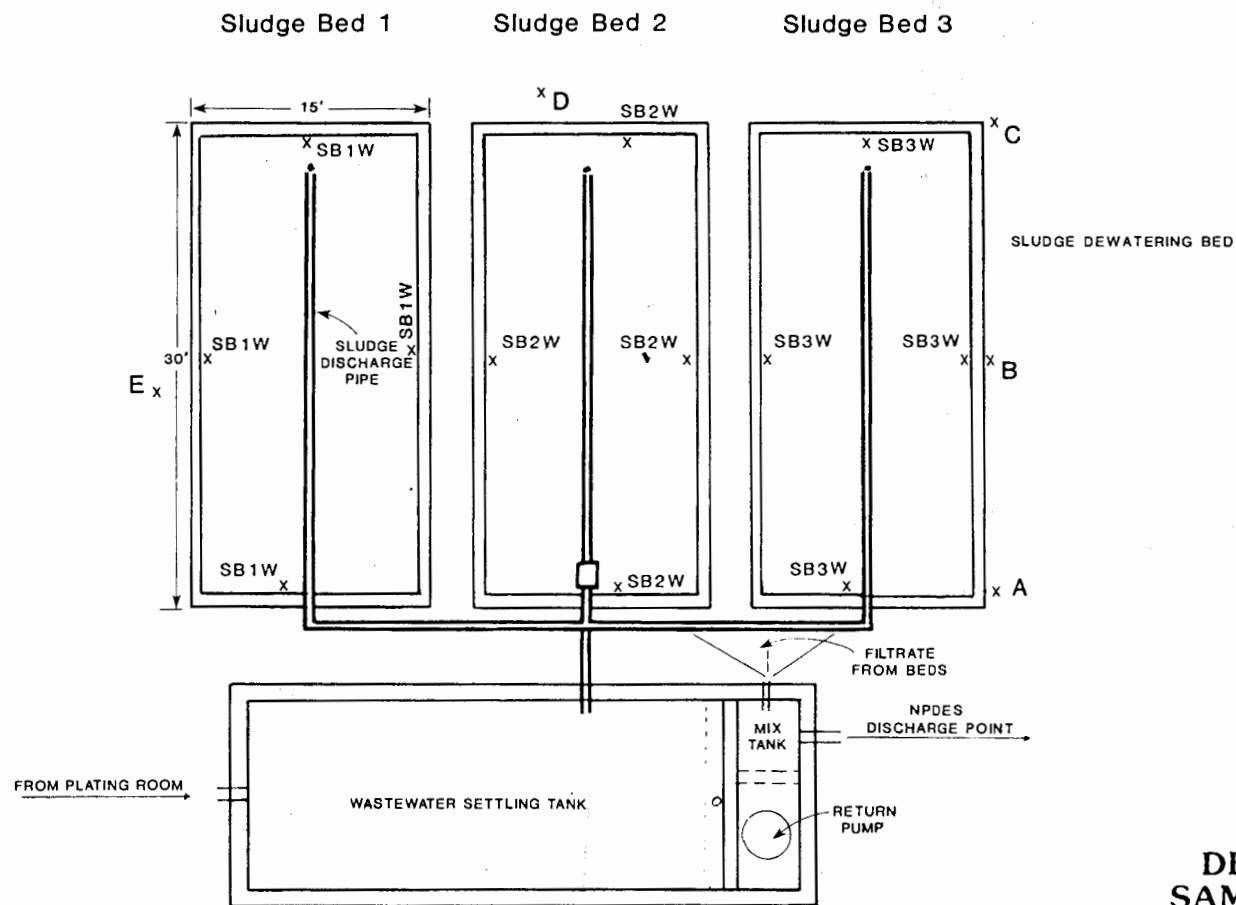
## 2.0 CLOSURE OF THE DEWATERING BEDS

The dewatering beds ceased operating with the implementation of the sludge thickening tank and vacuum filter press system. At this time, only one of the three beds contained sludge. In accordance with Section 2.3.3 of the "Final Closure Plan - Sludge Dewatering Beds," dated March 1984, Envirite, Inc. removed and disposed of the remaining 3.2 tons of sludge. This removal and disposal took place in December 1984 and January 1985. All material was treated, rendered nonhazardous, and disposed of at Envirite's facility in York, Pennsylvania. Copies of the manifest documents and nonhazardous certification are provided in Appendix 7.

In accordance with the approved Closure Plan, the sludge dewatering beds were sampled before closure commenced. BCM coordinated the collection of soil, concrete, and cinder block samples from the empty dewatering beds and adjacent areas on April 24, 1985, and April 30, 1985. A total of 17 samples were collected from the following locations (see Figure 1):

- One core sample was collected from the concrete floor in each of the sludge dewatering beds (Sample Nos. SB1F, SB2F, SB3F). A duplicate sample was collected from Bed 1 (Sample No. SB1FD).
- One core sample was collected from the soil underlying each bed (Sample Nos. SP1D, SP2D, SP3D).
- One composite cinder block wall sample was taken from each bed (Sample Nos. SB1W, SB2W, SB3W), and a duplicate composite was collected from the walls of Bed 3 (Sample No. SB3WD).
- Five samples from the soil and gravel composing the French drain system were collected adjacent to the dewatering beds (Sample Nos. A, B, C, D, E).
- One background soil sample was collected from the northern side of Dadsworth Run.

A coring hammer drill was used to obtain samples of the concrete floors. The core samples were then pulverized and placed in glass sample jars with Teflon-lined lids.



NOT DRAWN TO SCALE

PLAN VIEW

x Sampling Point

BCM PROJECT NO. 00-5293-05

Figure 1  
**SLUDGE  
 DEWATERING BEDS  
 SAMPLING LOCATIONS**  
 Dates Sampled  
 4/24/85 and 4/30/85  
 LEEDS & NORTHRUP COMPANY  
 North Wales, PA



Soil samples from beneath each dewatering bed and from the drain system adjacent to each bed were collected using a hand auger. A jackhammer was used to penetrate the concrete floor of each bed to allow collection of soil samples. All soil samples were placed in glass jars with Teflon-lined lids. The soil samples collected from the area adjacent to each sludge bed were collected from an average depth of 6 feet.

Samples of the cinder block walls were collected using a sledge hammer to knock out sections of the block. A section of block was taken from all four walls of each sludge bed, and a composite sample was formed from grab samples of this material for each sludge bed. The samples were collected from below the former sludge level. All samples were transported to BCM's EPA-Certified (EPA/PA38007) laboratory in Norristown, Pennsylvania, for analysis.

The samples were subjected to the EPA Toxic Extraction Procedure (TEP), and the leachates were analyzed for cadmium and chromium in accordance with Section 2.3.3 of the approved Closure Plan. Analytical results are presented in Table 1. Concentrations of cadmium and chromium in the TEP leachate were well below the maximum concentration for EP Toxicity (1.0 mg/l - cadmium and 5.0 mg/l - chromium). Therefore, the structural components of the sludge beds (concrete and cinder block) and surrounding soil are not hazardous wastes, as defined by the EP Toxicity criteria. Accordingly, the beds were closed utilizing the method detailed in Section 2.3.4 of the "Final Closure Plan - Sludge Dewatering Beds," dated March 1984 and described herein.

Closure activities at the North Wales facility commenced on July 1, 1985, with demolition of the abovegrade portion of the bed sidewalls. Concrete blocks from the bed sidewalls were removed with a backhoe and placed on the concrete floors. The three dewatering beds were then backfilled to grade with clean fill material imported from offsite. The former filtrate discharge pipe into the mix tank (see Figure 1) was sealed with an epoxy cement plug to eliminate potential discharge of water from the closed sludge bed facility into the wastewater treatment system. All disturbed areas were then seeded with a perennial grass mixture. Following the seeding, the site was mulched with straw. Closure activities were completed on July 3, 1985.



TABLE 1  
ANALYTICAL RESULTS FROM SOIL AND  
CONCRETE SAMPLES EP TOXICITY LEACHATE

LEEDS & NORTHRUP INSTRUMENTS  
NORTH WALES, PENNSYLVANIA

Sample Identification	Type of Sample	Date Collected	Concentration	
			Cadmium (mg/l)	Chromium (mg/l)
SB1F	Concrete	4/24/85	0.01	<0.02
SB1FD	Concrete	4/24/85	0.01	<0.02
SB1W	Concrete	4/24/85	0.17	<0.02
SB2F	Concrete	4/24/85	<0.01	<0.02
SB2W	Concrete	4/24/85	0.02	<0.02
SB3F	Concrete	4/24/85	0.01	<0.02
SB3WD	Concrete	4/24/85	0.02	<0.02
SB3W	Concrete	4/24/85	0.03	<0.02
A	Soil	4/24/85	0.02	<0.02
B	Soil	4/24/85	<0.01	<0.02
C	Soil	4/24/85	0.02	<0.02
D	Soil	4/24/85	0.02	<0.02
E	Soil	4/24/85	0.01	<0.02
BACKGROUND	Soil	4/24/85	0.01	<0.02
SP1D	Soil	4/30/85	<0.01	<0.02
SP2D	Soil	4/30/85	<0.01	<0.01
SP3D	Soil	4/30/85	<0.02	<0.02

Source: BCM Project No. 00-5293-05



### 3.0 ENGINEER'S AND OWNER'S CERTIFICATION OF CLOSURE

Provided on the following pages are the Engineer's and Owner's Certification of Closure. These have been completed in accordance with Subsection 75.265(o)(10), closure and postclosure, of the PADER Hazardous Waste Regulations.

PROFESSIONAL ENGINEER CERTIFICATION OF CLOSURE

I, JAMES V. HUSTED, a Professional Engineer registered  
(Name)

pursuant to the Professional Engineers Registration Law, 63 P.S. §§148 et seq., hereby  
certify that I have reviewed the Closure Plan for the Sludge Dewatering Beds at  
(Type of Facility)

LEEDS AND NORTHRUP INSTRUMENTS ("facility"), located  
(Name of Hazardous Waste Facility)

at Sumneytown Pike, North Wales, Pennsylvania  
(Location)

that I am familiar with the rules and regulations of the Pennsylvania Department of  
Environmental Resources pertaining to closure of such facility, and that I personally have  
made visual inspection(s) of the aforementioned facility, and that the closure of the  
aforementioned facility has been performed in full and complete accordance with the  
facility's closure plan approved in writing by the Department of Environmental Resources on  
January 3, 1985, and the rules and regulations of the Department  
codified at 25 Pa. Code Chapter 75.

  
(Signature)

9/5/85  
(Date)

PE - 026993-E

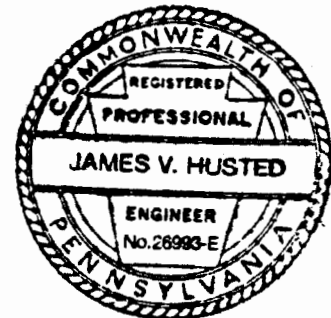
(Professional Engineering License Number)

One Plymouth Meeting  
Plymouth Meeting, PA 19462  
(Business Address)

(Seal)

(215) 825-3800

(Telephone Number)



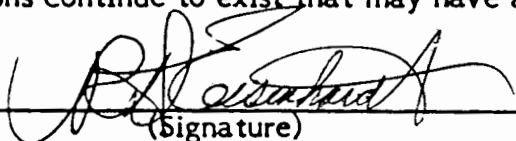
OWNER OR OPERATOR CERTIFICATION OF CLOSURE

Signal

The undersigned, Leeds & Northrup Co, A Unit of General, a (1) Corporation,  
(Name of Owner or Operator)  
incorporated under the laws in the State of Delaware and licensed to do business in  
Pennsylvania, or (2) NA,  
(Partnership, Individual, Municipality or Other Entity)  
with its principal place of business at Sumneytown Pike, North Wales, PA, which  
(Address)  
formerly owned or operated a hazardous waste Storage Facility  
(Description of Hazardous Waste Activity)  
(hereinafter "Facility") known as Leeds & Northrup Company and  
(Name of Hazardous Waste Facility)  
located at Sumneytown Pike, North Wales, PA  
(Location)  
in Montgomery County, Pennsylvania, has completed and permanently ceased the  
active operation of the facility and has fully implemented all measures relating to the  
closure of the facility as set forth in the Closure Plan approved by the Pennsylvania  
Department of Environmental Resources for said facility.

NOW, THEREFORE, I (we) LEEDS & NORTHRUP CO., A Unit of General Signal  
(Name of Owner/Operator)

hereby swear and affirm that the above-named hazardous waste facility has been closed in  
accordance with the facility's Closure Plan approved in writing by the Department on  
January 3, 1985, that all measures relating to the closure of the facility required  
by the Closure Plan and the rules and regulations of the Department codified at 25 Pa. Code  
Chapter 75 have been fully implemented, and that to the best of my (our) knowledge, no  
violations continue to exist that may have arisen prior to closure.

  
(Signature)

R. D. Eisenhardt

Group Executive

(Title)

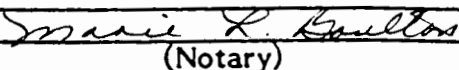
LEEDS & NORTHRUP COMPANY, A Unit of General Signal  
Sumneytown Pike, North Wales, PA 19454

(Address)

State of Pennsylvania  
County of Montgomery

Taken, sworn and subscribed before me, this

28<sup>th</sup> day of August A.D. 1985

  
(Notary)

MARIE L. BOULTON, Notary Public  
North Wales Boro, Montgomery Co.  
My Commission Expires Aug. 8, 1987



## APPENDIX 1

APPROVAL TO OPERATE VACUUM FILTER -  
LETTER, PADER TO LEEDS & NORTHRUP COMPANY



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES

1875 New Hope Street  
Norristown, PA 19401  
215 270-1920



August 31, 1984

Mr. Benjamin M. Stringer  
Manager - Security  
Leeds and Northrup Company  
Sumneytown Pike  
North Wales, PA 19454

Dear Mr. Stringer:

In response to your correspondence dated August 28, 1984 to Mr. James Dolan of my staff; approval is hereby granted to begin use of the dewatering vacuum filter press in the sludge treatment process. Sludge removal must be done in accordance with current hazardous waste rules and regulations.

If you have any further questions, I may be reached at the above number.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Law H 2".

LAWRENCE H. LUNSK  
Solid Waste Facilities Supervisor

Re 30 FR9-133



## APPENDIX 2

GRANTING OF PERMIT BY RULE STATUS -  
LETTER, PADER TO LEEDS & NORTHRUP COMPANY





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES

1875 New Hope Street  
Norristown, PA 19401  
215/270-1920



January 29, 1985

RE: Permit by Rule for  
Hazardous Waste Facility  
PAD 002277952

Mr. Benjamin M. Stringer  
Manager, Security  
Leeds & Northrup Company  
Sumneytown Pike  
North Wales, Pennsylvania 19454

Dear Mr. Stringer:

This refers to your request for permit by rule status under the Pennsylvania Hazardous Waste Regulations, Section 75.265(z)(17). We have reviewed your revised notification of hazardous waste activity form and an inspection was made on January 9, 1985.

Your facility satisfies all the conditions that are deemed necessary for a hazardous waste treatment facility to have permit by rule status. Permit by rule status is contingent upon being in compliance with all the hazardous waste management's conditions as stated in Section 75.265(z)(17) and non-compliance will result in the loss of the permit by rule status.

Very truly yours,

WAYNE L. LYNN  
Regional Solid Waste Manager

cc: Field Supervisor  
: Division of Solid Waste Management  
: U. S. EPA Code 3HW32  
: Re 30 WP#



### APPENDIX 3

PADER CLOSURE PLAN APPROVAL WITH PROVISIONS -  
LETTER, PADER TO LEEDS & NORTHRUP COMPANY



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES**



Bethlehem District Office  
Bureau of Solid Waste Mgmt.  
520 East Broad Street  
Bethlehem, PA 18018  
861-2070

January 3, 1985

RE: Closure Plan for Hazardous Waste  
Facility PAD 002277952

Mr. Benjamin M. Stringer  
Leeds and Northrup Co.  
Sumneytown Pike  
North Wales, Pennsylvania 19454

Dear Ben:

The subject closure plan which was received on March 20, 1984, has been reviewed by our technical staff. It has been found to be satisfactory with the following provisions:

1. Since the inground units are designed to drain ("dewater"), they cannot be ideally described as tanks; therefore, groundwater monitoring must be instituted under PA Code 75.265(n). Please contact Mr. Joseph Manduke, Hydrogeologist, at (215) 270-1930 for guidance.
2. E P Toxic tests of liquid and solid lagoon tests must be done immediately.
3. Total removal from the site of all wastes within thirty (30) days of receipt of this approval.
4. Total removal, after soil testing, of all rock and subsoils found to be E P Toxic.
5. Proper grading and reseedling of excavated area after closure. Please contact Mr. Doug Mason, Soil Scientist at (215) 270-1931 for guidance.

Upon completion of all closure activities, please execute the enclosed certifications and forward them to me. If you have any questions, please feel free to contact me.

Very truly yours,

  
JAMES A. DOLAN  
Hazardous Waste Coordinator

JAD:mln  
cc: Mr. Lusk  
: Mr. Manduke  
: Mr. Mason  
: Div. of Hazardous Waste Mgmt.  
: U.S. EPA Code 3HW31



#### APPENDIX 4

#### BCM'S RESPONSE TO PROVISIONS - LETTER, BCM TO PADER



## BCM Eastern Inc.

Engineers, Planners and Scientists

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One Plymouth Meeting • Plymouth Meeting, PA 19462 • Phone: (215) 825-3800

April 24, 1985

Mr. James A. Dolan  
Hazardous Waste Coordinator  
Bethlehem District Office  
Bureau of Solid Waste Management  
520 East Broad Street  
Bethlehem, PA 18018

Subject: Closure Plan for Hazardous Waste Facility  
Leeds and Northrup Company, PAD 002277952  
BCM Project No. 00-5293-05

Dear Mr. Dolan:

In accordance with the provisions specified in the January 3, 1985 response to Closure Plan received from the Pennsylvania Department of Environmental Resources (PADER), BCM Inc. is pleased to provide the following clarifications. The format used below identifies the PADER specified provisions and provides Leeds and Northrup Company's responses.

1. Since the inground units are designed to drain ("dewater"), they cannot be ideally described as tanks; therefore, groundwater monitoring must be instituted under PA Code 75.265(n).

Response: All three sludge dewatering beds have competent cement floors. It is not likely that material entering these beds would have leached through into the underlying soil and eventually into the groundwater. The sidewalls of the impoundments are composed of permeable concrete block. Filtrate from the sludge passes through the concrete block walls and is collected by a French drain. The French drain system would prevent the filtrate from migrating into the surrounding soil and into the groundwater. This conclusion will be confirmed by a comprehensive sampling plan (Section 2.33 of the Closure Plan), which will collect samples of the cement floors, the cement blocks, the soil underlying each dewatering bed, and the soils around the French drain system. A leachate will be prepared on each sample and they will be analyzed for total chromium (as per your 2/26/85 telephone conversation with BCM's Mary King). Should elevated chromium levels be detected in the underlying soil, a groundwater monitoring



April 24, 1985

program will be considered. Otherwise, it will be concluded that significant chromium has not leached into the soil from the dewatering beds and therefore the groundwater has not been impacted. Mr. Joseph Manduke will be notified prior to sampling so that he may be on site to observe sampling activities.

2. EP toxic tests of liquid and solid lagoon tests must be done immediately.

Response: The EP toxic tests have been completed and the results are enclosed. These results show that the last sludge dewatered in the lagoon was not EP toxic.

3. Total removal from the site of all wastes within thirty (30) days of receipt for this approval.

Response: All wastes have been removed from the dewatering beds. Enclosed are a manifest document for the removal and a copy of the nonhazardous certification from Envirite.

4. Total removal, after soil testing, of all rock and subsoils found to be EP toxic.

Response: Soil sampling is scheduled for April 24, 1985. A leachate will be prepared from each sample. The leachates will be analyzed for total chromium. Should soil and rock be found to be EP toxic, it will be removed and disposed of at an appropriate off-site facility.

5. Proper grading and reseeding of excavated area after closure.

Response: BCM contacted Mr. Doug Mason of PADER for guidance. He agreed with the methods for refilling and regrading specified in Section 2.3.6 of the approved closure plan. Mr. Mason requested he be given the opportunity to inspect the fill material prior to filling procedures. BCM will comply with this request.

We believe that the responses above satisfy the provisions specified by the PADER. If additional information on any item is necessary, please do not hesitate to contact us.

Very truly yours,

*Mary M. King for*

Lawrence J. Duffy  
Geologist

mac

cc: B. M. Stringer, L&N  
M. M. King, BCM  
A. M. Robinson, BCM

BCM

## APPENDIX 5

ADDITIONAL SUBMITTALS TO PADER FOR PROVISIONS COMPLIANCE,  
BCM TO PADER



**BCM Eastern Inc.**  
Engineers, Planners and Scientists

One Plymouth Meeting • Plymouth Meeting, PA 19462 • Phone: (215) 825-3800

May 15, 1985

Mr. James A. Dolan  
Hazardous Waste Coordinator  
Bethlehem District Office  
Bureau of Solid Waste Management  
520 East Broad Street  
Bethlehem, PA 18018

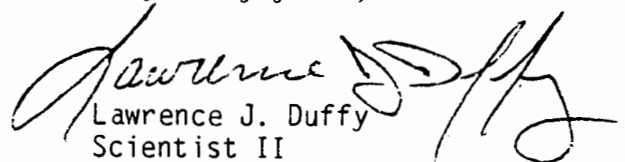
Subject: Closure Plan for Hazardous Waste Facility  
Leeds and Northrup Company, PAD002277952  
BCM Project No. 00-5293-05

Dear Mr. Dolan:

Enclosed are the items specified in our submission dated April 24, 1985. The items include: leachate analysis completed on sludge sample from dewatering beds, including a rerun for cadmium; manifest documents for sludge removed from the dewatering beds; and nonhazardous certification for sludge removed.

Should you need further information about the dewatering beds or have any questions, please do not hesitate to call.

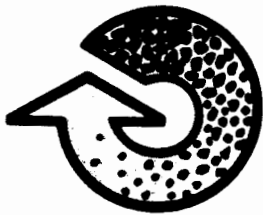
Very truly yours,

  
Lawrence J. Duffy  
Scientist II

/mac  
enclosure

cc: B. M. Stringer, L&N  
M. M. King, BCM  
A. M. Robinson, BCM





**ENVIRITE**

THE WASTE TREATMENT SERVICE


Company: Leeds & Northrup  
North Wales, Pa.  
Sample No: Y#0644  
Sample Date: 11/30/84  
Date Received: 11/30/84  
Date Analysis Completed: 12/5/84

E.P. Toxicity Analysis

<u>Parameter</u>	<u>Leachate Concentration (mg/l)</u>	<u>Maximum Allowable Concentration 40 CFR 261.24 (mg/l)</u>
Arsenic	<0.28	5.0
Barium	4.78	100.0
Cadmium	3.02	1.0
Chromium (T)	0.24	5.0
Chromium (VI)	<0.05	-
Lead	<0.08	5.0
Mercury	<0.0001	0.2
Nickel	15.51	-
Selenium	<0.23	1.0
Silver	0.03	5.0

Cadmium level of the Leachate is higher than allowable concentration.

Total Cyanide - Sample as received < 1.08 mg/l.

  
Judith C. Sayko  
Laboratory & Processing Manager

JCS/dlt



# BCM Laboratory Division

521 W. GERMANTOWN PIKE  
NORRISTOWN, PA 19401  
215-825-0447

PLEASE REMIT CHECKS TO:  
BCM Eastern Inc.  
1 PLYMOUTH MEETING  
PLYMOUTH MEETING, PA. 19462  
215-825-3800

## CLIENT

LEEDS & NORTHRUP COMPANY, INC.  
ATTN: MR. BEN STRINGER  
SUMNEYTOWN PIKE  
NORTH WALES PA 19454

00-700167

4/3/85

## FINAL REPORT

REF:

PAGE 1

This is the final report for the samples shown below. If you have questions concerning this report please call 215-825-0447.

BCM NUMBER N420960

CLIENT SAMPLE ID BED #2

DATE SAMPLED 12/11/84

DATE RECEIVED 12/11/84

TEST AND UNITS (ANAL. METH.)

CADMIUM MG/L (16) 0.01

METAL DIGESTION (HC) MT.DY (110) 12.17

LAB CERT. : EPA/PA-#38007, NJ-#77175, AL- #40300, EPA BULK ASBESTOS QC-#3339  
AIHA/NIOSH - # 241/17401

METHODS : 16) EPA # 213.1 110) EPA - METALS

\*\* END OF REPORT \*\*



PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES  
Division of Hazardous Waste Management  
P. O. Box 2063  
Harrisburg, PA 17120

R-SWM-51:Rev.5/84

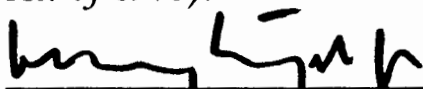
Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Leeds + Northrup Sumneytown Pike North Wales Pa. 19454				A. State Manifest Document Number PAB 00409382		
4. Generator's Phone 215, 643-2000				B. State Gen. ID		
5. Transporter 1 Company Name Envirite Corp.				6. US EPA ID Number PA.D.0.10.15.4.0.45		
7. Transporter 2 Company Name				8. US EPA ID Number		
9. Designated Facility Name and Site Address Envirite Corp. 1600 Penna Ave. York Pa. 17404				10. US EPA ID Number PA.D.0.10.15.4.0.45		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) a. Hazardous waste Liquid N.O.S. ORM-E NA 9189				12. Containers No. Type 0.01 TT	13. Total Quantity 15.80 G	
				14. Unit G	15. Waste No. F006	
J. Additional Descriptions for Materials Listed Above (include physical state and hazard code)				K. Handling Codes for Wastes Listed Above		
a.				a.		
b.				b.		
c.				c.		
d.				d.		
15. Special Handling Instructions and Additional Information						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws/regulations.						
Printed/Typed Name Courtney F. Knele				Signature [Signature]		
17. Transporter 1 Acknowledgement of Receipt of Materials				Date 1. 3. 85		
Printed/Typed Name John P. Hess				Signature [Signature]		
18. Transporter 2 Acknowledgement of Receipt of Materials				Date		
Printed/Typed Name				Signature		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name				Signature		
				Date Month Day Year		

# NONHAZARDOUS CERTIFICATION

This is to certify that Metal Hydroxide Sludge waste received 1-3-1985  
from Leeds & Northrup on manifest  
# PAB00409382 has been rendered nonhazardous under EPA definitions by  
Envirite Corporation. This process was completed in full compliance with the terms of  
Envirite Corporation's delisting petition granted by the U.S. EPA December 16,  
1981, and the State of Pennsylvania on November 5, 1981.

Having changed this hazardous waste into a nonhazardous material, Envirite  
Corporation has eliminated all Leeds & Northrup future hazardous  
waste liability for this material under RCRA (Resource Conservation and Recovery  
Act of 1976).



Geoffrey Stengel, Jr.  
President

\_\_\_\_\_  
Operations Manager

**ENVIRITE**

Corporate Headquarters  
Blue Bell, Pennsylvania 19422



PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES  
Division of Hazardous Waste Management  
P. O. Box 2063  
Harrisburg, PA 17120

40644

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UNIFORM HAZARDOUS  
WASTE MANIFEST

1. Generator's US EPA ID No.

PAD 90227795257712

Manifest  
Document No.

2. Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address  
**LEADS & NORTHRUP**  
**Sunnytown Pike**  
**North Wales, Pa. 19454**

A. State Manifest Document Number

PAB 00459712

B. State Gen. ID

4. Generator's Phone (215) 643-2000

C. State Trans. ID

PA-AH 2131

5. Transporter 1 Company Name  
**ENVIRITE CORP.**

6. US EPA ID Number

PAD 0101540455

D. Transporter's Phone (717) 846-1900

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID

PA-AH

9. Designated Facility Name and Site Address

**ENVIRITE CORP.**

**1600 PA. AVE.**

**YORK, PA. 17404**

10. US EPA ID Number

PAD 010154045

F. Transporter's Phone ( )

G. State Facility's ID Not Required

H. Facility's Phone (717) 846-1900

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. **HAZARDOUS WASTE LIQUID, N.O.S.**  
**ORM-E**  
**NA9189**

001

TT

488.1

G

P006

J. Additional Descriptions for Materials Listed Above (Include physical state and hazard code)

K. Handling Codes for Wastes Listed Above

a. S02

c. T10

b. T31

d. D01

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws/regulations.

Printed/Typed Name

W. T. Hyndman Jr

Signature

W. T. Hyndman Jr

Date

Month Day Year

11/22/84

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Russ Quier

Signature

Russ Quier

Date

Month Day Year

12/20/84

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date

Month Day Year

11/22/84

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

KEHL BERRY

Signature

KEHL BERRY

Date

Month Day Year

11/22/84

# NONHAZARDOUS CERTIFICATION

*This is to certify that M. H. Sludge waste received 12-20-84  
from LEEDS & NORTHRUP on manifest  
# PAB 00459712 has been rendered nonhazardous under EPA definitions by  
Envirite Corporation. This process was completed in full compliance with the terms of  
Envirite Corporation's delisting petition granted by the U.S. EPA December 16,  
1981, and the State of Pennsylvania on November 5, 1981.*

*Having changed this hazardous waste into a nonhazardous material, Envirite  
Corporation has eliminated all LEEDS & NORTHRUP's future hazardous  
waste liability for this material under RCRA (Resource Conservation and Recovery  
Act of 1976).*

  
\_\_\_\_\_  
Geoffrey Stengel, Jr.  
President

\_\_\_\_\_  
Operations Manager

**ENVIRITE**  
Corporate Headquarters  
Blue Bell, Pennsylvania 19422



## APPENDIX 6

CORRESPONDENCE REGARDING GROUNDWATER MONITORING  
LETTER, PADER TO BCM  
LETTER, BCM TO PADER

# COMMONWEALTH of PENNSYLVANIA



## DEPARTMENT OF ENVIRONMENTAL RESOURCES

Bethlehem Office  
520 East Broad Street  
Bethlehem, PA 18018  
861-2070

June 7, 1985

Re: Closure of Hazardous Waste Management  
Facility  
Leed & Northrup Company  
PAD002277952

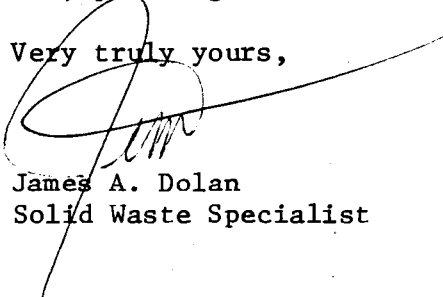
Ms. Mary King  
BCM Eastern, Inc.  
One Plymouth Meeting  
Plymouth Meeting, PA 19462

Dear Mary:

Permission is hereby granted to install a lysimeter for monitoring purposes in lieu of an additional well for the referenced facility.

If you have any further questions, please give me a call.

Very truly yours,

  
James A. Dolan  
Solid Waste Specialist

JAD/bal

CC: Mr. Luns





## BCM Eastern Inc.

Engineers, Planners and Scientists

---

One Plymouth Meeting • Plymouth Meeting, PA 19462 • Phone: (215) 825-3800

July 8, 1985

Mr. Thomas Brenton  
Bureau of Solid Waste Management  
Department of Environmental Resources  
1875 New Hope Street  
Norristown, PA 19401

Subject: Leeds and Northrup Company  
Facility Number PAD 002277952  
Facility PAD 002277952  
BCM Project No. 00-5293-05

Dear Mr. Brenton:

As discussed during our telephone conversation on Wednesday, June 26, 1985, it is understood that Leeds and Northrup Company does not have to conduct any type of groundwater monitoring as part of the closure of three (3) hazardous waste dewatering beds located at their North Wales, Pennsylvania facility. This recommendation by you supersedes Mr. James A. Dolan's (PADER - Bethlehem) recommendation that a lysimeter be installed for groundwater monitoring (see attached letter).

Should you have any questions, please do not hesitate to contact me.

Very truly yours,

*Mary M. King*

Mary M. King  
Project Engineer III

MMK/rkh

Attachment

cc: B. M. Stringer, Leeds and Northrup  
J. A. Dolan, PADER - Bethlehem  
L. J. Duffy, BCM



## APPENDIX 7

MANIFEST DOCUMENTS FOR SLUDGE REMOVAL  
AND NONHAZARDOUS CERTIFICATION BY ENVIRITE



PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES  
Division of Hazardous Waste Management  
P. O. Box 2063  
Harrisburg, PA 17120

ER-SWM-51:Rev.5/84

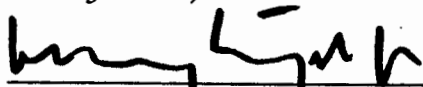
Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No. <b>PAD0002277952</b>	Manifest Document No. <b>000002</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>Leeds + Northrup Sumneytown Pike North Wales Pa. 19454</b>				A. State Manifest Document Number <b>PAB 00409382</b>		
4. Generator's Phone <b>215, 643-2000</b>				B. State Gen. ID		
5. Transporter 1 Company Name <b>Envirite Corp.</b>		6. US EPA ID Number <b>PAD010154045</b>		C. State Trans. ID <b>PA-AH A131</b>		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <b>717 846-1900</b>		
9. Designated Facility Name and Site Address <b>Envirite Corp. 1600 Penna Ave. York Pa. 17404</b>		10. US EPA ID Number <b>PAD010154045</b>		E. State Trans. ID <b>PA-AH</b>		
				F. Transporter's Phone ( )		
				G. State Facility's ID <b>Not Required</b>		
				H. Facility's Phone ( ) <b>717, 846-1900</b>		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <b>Hazardous waste Liquid A.D.S. ORM-E NA 9189</b>		No.	Type			
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above (Include physical state and hazard code)		K. Handling Codes for Wastes Listed Above				
a.		g.		a.		c.
b.		d.		b.		d.
15. Special Handling Instructions and Additional Information						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws/regulations.						
Printed/Typed Name <b>Courtney F. Imele</b>		Signature <i>[Signature]</i>		Date <b>1 B. 85</b>		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name <b>John P. Hess</b>		Signature <i>[Signature]</i>		Date <b>1. 3 85</b>		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Date Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Date Month Day Year		

# NONHAZARDOUS CERTIFICATION

*This is to certify that M. H. Sludge waste received 12-20-84  
from LEEDS & NORTHRUP on manifest  
# PAB 00459712 has been rendered nonhazardous under EPA definitions by  
Envirite Corporation. This process was completed in full compliance with the terms of  
Envirite Corporation's delisting petition granted by the U.S. EPA December 16,  
1981, and the State of Pennsylvania on November 5, 1981.*

*Having changed this hazardous waste into a nonhazardous material, Envirite  
Corporation has eliminated all LEEDS & NORTHRUP's future hazardous  
waste liability for this material under RCRA (Resource Conservation and Recovery  
Act of 1976).*



*Geoffrey Stengel, Jr.  
President*

*Operations Manager*

**ENVIRITE**

Corporate Headquarters  
Blue Bell, Pennsylvania 19422



PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES  
Division of Hazardous Waste Management  
P. O. Box 2063  
Harrisburg, PA 17120

40644

ER-SWM-51:Rev.5/84

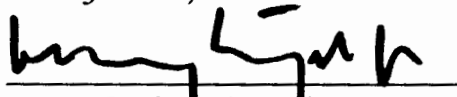
Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <b>PAD 002277952</b>	Manifest Document No. <b>157712</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>LEEDS &amp; NORTHROP Sunnytown Pike North Wales, Pa. 19454</b>				A. State Manifest Document Number <b>PAB 00459712</b>		
4. Generator's Phone ( <b>215</b> ) <b>643-2000</b>				B. State Gen. ID		
5. Transporter 1 Company Name <b>ENVIRITE CORP.</b>		6. US EPA ID Number <b>PAD 0101540435</b>		C. State Trans. ID <b>PA-AH</b>		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone ( <b>717</b> ) <b>846-1900</b>		
9. Designated Facility Name and Site Address <b>ENVIRITE CORP. 1600 PA. AVE. YORK, PA. 17404</b>		10. US EPA ID Number <b>PAD 0101540435</b>		E. State Trans. ID <b>PA-AH</b>		
				F. Transporter's Phone ( )		
				G. State Facility's ID <b>Not Required</b>		
				H. Facility's Phone ( <b>717</b> ) <b>846-1900</b>		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <b>HAZARDOUS WASTE LIQUID, N.O.S. COR-E NA9189</b>		<b>001</b>	<b>TR</b>	<b>488.1</b>	<b>G</b>	<b>PA006</b>
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above (Include physical state and hazard code)				K. Handling Codes for Wastes Listed Above		
a.		c.		a. <b>SC2</b> c. <b>T10</b>		
b.		d.		b. <b>T31</b> d. <b>D81</b>		
15. Special Handling Instructions and Additional Information						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws/regulations.						
Printed/Typed Name <b>W. J. Hyndman Jr</b>		Signature <i>W. J. Hyndman Jr</i>			Date <b>1/22/84</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name <b>RUSS QUIER</b>		Signature <i>Russ Quier</i>			Date <b>1/22/84</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature			Date	
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name <b>KEHL BERRY</b>		Signature <i>KEHL BERRY</i>			Date <b>1/22/84</b>	

# NONHAZARDOUS CERTIFICATION

This is to certify that Metal Hydroxide Sludge waste received 1-3-1985  
from Leeds & Northrup on manifest  
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Geoffrey Stengel, Jr.  
President

\_\_\_\_\_  
Operations Manager

**ENVIRITE**

Corporate Headquarters  
Blue Bell, Pennsylvania 19422